766. The Agricultural Schools were being converted into Basic Schools to impart training in Agriculture to the sons of the cultivators. This, not only ensures scientifically and practically trained agriculturists but also provides personnel to serve the village community.

(iii) Forests.

General.

767. The Re-organisation of the State, resulted in the creation of two Conservators Circles, one called the Coorg Circle and the other called the Bellary Circle in addition to the two existing Circles, namely, the Shimoga Circle pertaining to the old Mysore State and the Belgaum Circle pertaining to the old Bombay State. The Forest Department consists of four Conservators controlling charges with one Chief Conservator as the head of the Department.

Extent of State Forest Area.

768. The Old Mysore State had 5095·66 square miles of forest area under its Forest Department. The forest area of the integrated areas as shown below was 8,457·49 square miles thus bringing the total forest area of the New Mysore State to 13,553·15 square miles.—

Bombay State (Belgaum Circle)	...	4,717·57
Coorg State	...	516·89
Hyderabad State (Gulbarga Division)	...	638·51
Madras State (South Kanara and Kollegal Divisions)	...	2,585·02
Total	...	8,457·49

769. Out of the total area of 13,553·15 square miles, 12,112·53 square miles were in charge of the Forest Department and 1,440·62 square miles were in charge of the Revenue Department.

Protection of Forests.

770. The smugglers of sandalwood and timber were prosecuted. Spike disease continued to take a heavy toll of sandal trees in the districts of Bangalore, Kolar, Tumkur, Hassan, Mysore and Coorg. Investigation of this disease was one of the main problems tackled at the Forest Research Laboratory, Bangalore, lately transferred to the Central Government.

771. Animal pests.—Bisons, sambhars and pigs caused the usual damage like trampling, debarking, and uprooting plants in the younger teak plantations of all the Divisions.

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Wild boars also damaged Simethangadi (Cassia Siamea) plants in the plantations of Ayanur Range in Shimoga Division. Rodents caused considerable damage to seedlings in teak nurseries by nibbling the carrots. In Chickmagalur Division rodents were reported to have caused extensive damage in teak plantations by uprooting the planted teak stumps and eating away the carrot.

Protection from grazing.

772. In the Old Mysore State, cattle grazing was free excepting in Bellary Division. It was also free in Belgaum Circle. In the remaining integrated areas it was not free.

773. The total revenue realised under "Grazing" on pre-paid licenses, concessions, leases, etc., amounted to Rs. 47,958-41.

Drought.

774. In Hassan and Chikmagalur Divisions late on-set of the monsoons delayed planting operations. In Bangalore District heavy casualities were reported in Casuarina plantations due to drought. Plantations in Tumkur District also suffered from this cause.

Insects.

775. Teak defoliation was severe in all the plantations of Shimoga Circle. In Kakanakote Range of Mysore Division defoliation was not severe. Grass-hoppers caused severe damage to Casuarina plants in Mandya Range of Mysore Division (Coorg Circle). Stem borers attacked Casuarina plants in Bangalore District.

Silviculture.

776. The forests in the four circles of Mysore State *viz.* (i) Belagaum (ii) Bellary, (iii) Shimoga and (iv) Coorg were managed under the different silvicultural systems sanctioned as per working plans.

777. In Shimoga Circle, suitable modifications were made to meet the situations arising from the execution of Major Hydro-Electric Project in Shimoga and Sagar Divisions. In Coorg Circle, North and South Coorg Divisions, the deciduous forests were worked under clearfelling and planting, and the evergreen forests under selection system. The fuel forests of South Kanara and Kollegal Divisions in Coorg Circle, and Chitaldrug, Kolar and Tumkur Divisions in Bellary Circle were managed purely under coppice system.

778. In Bellary District, the system followed was coppice with standards and selection felling in respect of timber species. In Gulbarga Division, the forests were managed with coppice with reserves system.

779. The natural regeneration of teak was not encouraging, but that of its associates however, like Dalbergia latifolia, Terminalia tomentosa and Pterocarpus marsupium was good.

Natural Regeneration.

780. In the mixed deciduous forests of Belgaum Circle natural teak regeneration was not adequate, but bamboo was doing well.

781. Sandal regeneration was found throughout its natural habitate. The growth of cane in the evergreen and semi-evergreen forests of the Kanara Districts was satisfactory.

782. In Bellary Circle, the natural regeneration was fair. Teak regeneration in some areas like Chincholi and Dharu, Kodangal and Yadgu Ranges was meagre and that of sandal very poor.

783. In Shimoga Circle, the natural regeneration of teak in moist deciduous tracts was poor, but that of Pterocarpus, Dalbergia and Terminalias and Adina was adequate. Natural regeneration of bamboos by seeds was profuse. Sandal regeneration was good in Hassan and Arsikere ranges only.

784. In Coorg circle, natural regeneration of moist deciduous species like Teak, Dalbergias and Terminalias, etc., was scarce in Masal Valley of Kakankote State Forest and portions of Murkal, Kachuvanaballi and Anechowkur State Forests.

785. In south Kanara, there was fair regeneration of Hopea, Dalbergia latifolia, Terminalia tomentosa, Terminalia paniculata and other fuel species, but that of teak was scanty. Natural regeneration of evergreen species and also of soft wood species was very satisfactory.

786. Sandal regeneration was good. There was profuse regeneration of Evodia roxburghiana in the semi-deciduous areas where matchwood species were grown artificially.

Artificial Regeneration.

787. Belgaum Circle.—A total area of 2,431·54 acres was planted with teak. Of these, 965·54 acres represents plantations raised under Agri-silvi method. Along the coastal belt of Kanara Western Division, 74·50 acres were planted with casuarina.

788. Bellary Circle.—One hundred acres were planted with sandal; 1,135 acres with Eucalyptus, Albizzia and

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Acacia etc., also 944 acres under the Afforestation of Waste Land Scheme. Under the Second Five Year Plan, 4,940 acres were planted with fuel species under Soil Conservation and another 200 acres under Anti-erosion, respectively. Sandal dibbling on mounds was done over an area of 650 acres.

789. *Shimoga Circle.*—About 747·50 acres were planted with teak, and 225·50 acres with Eucalyptus hybrid. In Sagar and Shimoga Divisions sowing of sandal quincuncially at every fifth stake in teak plantation was tried as an experimental measure. Regular plantations of sandal by sowing seeds of sandal and host together were carried out over an area of 230 acres.

790. *Coorg Circle.*—Two thousand sixty-six and half acres of teak plantations were raised in Mysore Division. Fuel plantations to the extent of 90 acres were raised. One thousand root cuttings of Boswellia serratta and 300 branch cuttings of Glyricidia maculata were planted in open blanks on Chamundi Hills.

Exploitation by Government Agency.

791. The exploitation of timber, firewood and bamboos was determined by the prescriptions of the sanctioned working plans. In Shimoga Circle, exploitation was mostly confined to river valley (Bhadra Reservoir) submersion areas and the areas released for the rehabilitation of displaced persons. Sandalwood collected at the koties in the integrated areas of Kollegal, Coorg and Belgaum was disposed of by public auctions.

792. The total out-turn in all the four circles of the State (including integrated areas) during the year was 17,59,707 c.ft. (35,194·14 tons) of timber, 1,532 nos. teak ballies, 26,803 nos. teak poles, 4,805 nos. other kinds of poles, 12,317 nos. balagi and other transmission poles and 50,681 sleepers.

793. The disposals were, as usual, by periodical auction sales, retail sales at sanctioned rates, supplies to Departments of the Government of India and of Mysore and private industrial concerns.

794. The total collections of sandalwood during the year were 1,152·14 tons in old Mysore State, Kollegal, South Kanara and Coorg and 6,282 sandal trees in Belgaum.

795. The ivory collected during the year was--

Division.		*Lbs.*	Ozs.
Mysore	...	59	0
Kollegal	...	23	0
Shimoga	...	37	12
Total	...	119	12
Stock on hand	...	86	10
Total	...	206	6

796. Out of this, 154 lbs. and 15 ozs. of ivory was supplied to Sri Chamarajendra Technical Institute, Mysore.

Forest Industries.

797. Out of 1,326·3 C.ft. of sizes and 16,500 R.ft. of reepers received from the Government Saw Mills, Shimoga, for the manufacture of benches, stools and blackboards, 1,166 benches, 674 stools and 188 blackboards were manufactured and supplied to the Educational Institutions.

Central Wood Working Factory, Tumkur.

798. Out of a total demand of Rs. 41,522-16 including the opening balance of Rs. 8,296-87, a sum of Rs. 32,432-34 was recovered leaving a balance of Rs. 9,089-81 at the end of the year. The expenditure during the year was Rs. 19,872-89.

799. This Plant, one of the oldest in South India, was started in the year 1928 and is continuing to work satisfactorily ever since. Here, Railway sleepers and Electric transmission poles were chiefly treated. The treatment was under the " Full Cell or Bethal Process " with a 50 : 50 mixture of coal tar creosote and light diesel oil. The capital outlay on the Plant, equipment and buildings at the close of the year was Rs. 1,35,044. One lakh, five thousand five hundred and sixty-three C.ft. (1,08,402 C.ft.) of poles, sleepers and sawn sizes were treated for the whole year using 64,358 gallons of preservative oils, 489 tons of firewood were consumed by the boiler.

The wood Preservation Plant, Bhadravathi.

800. Out of a total demand of Rs. 9,60,488 including an opening balance of Rs. 2,90,523, a sum of Rs. 7,15,557 was realised leaving a balance of Rs. 2,44,891 at the end of the year. The expenditure during the year was Rs. 4,40,000 (plus Rs. 62,000 seigniorage). The net profit for the year was Rs. 2,80,494 (Rs. 3,12, 685).

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The Government Saw Mills and Seasoning Plant, Shimoga.

801. The Mill worked satisfactorily throughout the year. The gross revenue has been computed at Rs. 2,66,912. The revenue expenditure, of Rs. 2,08,389-8, and the value of timber of Rs. 2,736-31 are set apart for the depreciation of the assets. The net profit has been computed at Rs. 31,154-6.

802. The other forest industries of the Department situated in the integrated areas were (1) The Jai Hind Saw Mills, Dandeli, (2) Joida Saw Mills, Joida, and (3) The Government Saw Mills, Murkal in Coorg.

803. The other private industries were (1) Two private Saw Mills (Belgaum Circles), one at Alnavar in Kanara Northern Division and the other at Kirwatti in Kanara Eastern Division, (2) Indian Plywood Manufacturing Co., Ltd., Dandeli, (3) Paper Factory, Dandeli, (4) Hindmatha Industries Ltd., Hubli, (5) The Bombay Wood Distillation Factory (Belgaum Division).

804. The demand, collection and balance of the Forest Department were Rs. 3,73,08,513-70, Rs. 2,75,46,071-45 and Rs. 94,62,048-39, respectively.

805. The gross revenue of the Forest Department for the year was Rs. 2,75,46,071-45 and the total expenditure under 110 Forest (*b*) Conservancy and works and Development was Rs. 88,22,673-25, the net revenue surplus being Rs. 1,87,23,398-20.

Research and Experiments.

806. Most of the research work done was carried out by the Silviculturist of the Old Mysore State or generally under his technical guidance. The Silviculture units of the Bombay State and the old Coorg State continued to function under the respective Divisional Forest Officers and carried out the usual programme of works allotted to them.

807. Research work in the Divisions progressed as per sanctioned programme. The purpose of research was mainly to study the Silvicultural characteristics of the important forest trees and to accelarate soil and moisture conservation. At the Marasandra centre (representative of dry deciduous type) best method for raising successful plantations in moisture deficient areas was tried out.

808. The study of species included all the different types, viz,, evergreen, semi-evergreen, deciduous, etc., existing in different parts of the State.

809. At Gajanur in Shimoga Research Centre, 1,685 pounds of Ocimum Kilimandscharicum herbage was distilled for the extraction of Camphor oil by installing a distillation unit.

810. There were three Lac Centres under the control of the Silviculturist. In two of them, *viz.*, Tumkur and Madhugiri Centres, a total quantity of 329 maunds (of 28 lbs each) and 15 pounds respectively was produced. "Kusum" lac was grown in one centre only, namely, Savandurga. In this centre, a quantity of 83 maunds and 22 pounds was produced on Kusum trees. The lac was exclusively supplied to the Government Lac and Paint Works at Mysore. Lac Cultivation.

Development Schemes—Second Five-Year Plan.

811. The following development schemes included in the Second Five-Year Plan were executed :—

1. *Rehabilitation of Degraded Forests* (*Afforestation of Waste Lands*):—The amount spent for the rehabilitation of degraded forests was Rs. 95,222 against the allotment of Rs. 1,00,000. Nine hundred and ninety-six acres of plantations were formed besides replacement of failures in the plantations of previous year.

2. *Lac Cultivation*:—The amount spent on Lac Cultivation was Rs. 7,287. The total quantity of crude lac produced was 373. mds and 9 lbs. About 560 mds. of lac were in stock at the end of the year.

3. *Soil Conservation* (*Afforestation*):—The amount spent on soil conservation was Rs 3,50,319 against the allotment of Rs. 4,40,000. Soil Conservation works followed by planting of suitable fuel species were done over an area of 7,006 acres. Pre-monsoon earth work was done over 1,000 acres.

4. *Matchwood Plantations Scheme.*—The expenditure under the scheme was Rs. 38,368.

5. *Development of Communications, Roads and Buildings*—The amount spent under this scheme was Rs. 87,073 against the allotment of Rs. 1,96,000.

6. *Rehabilitation of Forest Areas with Teak where Bamboo Flowering is imminent*:—The amount spent on this was Rs. 16,080 against Rs. 18,000 allotted. One thousand, eight hundred and twenty-five teak nursery beds were formed

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to ensure stock of stumps for planting during 1957-58. In Belguam Division, about 32 acres were planted up with teak and S-awar (Bombay malabaricum).

7. *Establishment of Wet Nurseries.*—The amount spent was Rs. 31,381 against the allotment of Rs. 38,000. Twenty-one wet nurseries of 240 beds each were formed.

8. *Regional Foresters' and Guards' Training Class.*—The amount spent was Rs. 16,042 against Rs. 11,000 allotted. Twenty-nine students were trained and the class was closed down in January 1957.

9. *Planting of Agave Hedges.*—The amount spent was Rs. 13,221 against Rs. 15,000 allotted. Agave bulbils were planted over a length of 12 miles in Northern Division, Kanara, 19 miles in Dharwar and 16 miles in Belgaum Division.

10. *Scheme for Raising Teak Plantations.*—The amount spent was Rs. 11,405 against the allotment of Rs. 40,000. In Belgaum Circle, 400 acres were given out on contract for clearfelling, for raising the plantations during the next rains, and 175 acres were brought under artificial regeneration. Eighty bags of teak seed were collected.

In Coorg Circle, 20 acres of teak plantation was raised in Kollegal Division.

11. *Forest Rehabilitation Scheme (Drawing up of working plan for the unorganised Forests of Kanara District).*—The amount spent on this scheme was Rs. 84,086. Out of the total gross area of 850 sq. miles of unorganised forests of North Kanara District, an area of 86·45 sq. miles was inspected and sample enumerations carried out.

12. *Establishment of Seasoning Kiln at Murkal in Coorg South Division*:—The amount spent was Rs. 33,332 as against Rs. 48,000 allotted. This amount was invested on the purchase of machinery and the construction of the Kiln building.

Welfare Activities of Backward Classes and Scheduled Tribes.

Free grant of Tali Palm.

812. In Belgaum Circle the deserving poor people of Bhatkal, Honnavar, and part of Kumta Taluks lying to the South of Aghanashni River, the majority of whom belong

to Backward Classes were granted Tali Palm to the extent of 1,800 annually from the forests free of charge. The powdered pith of these palms is used by them as food mixed with ragi, and this incidentally contributed to some extent to ease the food scarcity in these localities.

813. The forest lands to the extent of 701-31 acres were given out to 573 Backward Class members under the Agri-Sylvi method in Kanara Western Division, and Belgaum Division. Forest lands were also given out for cultivation on temporary leases.

Settlement of Mahratta Kunbies in Sagar Division.

814. In Shimoga Circle, there were 17 colonies of Mahratta Kunbies with 120 families in Sagar Division, their total strength being 645. These settlers, as usual, rendered services to the Department in clearing forest demarcation lines, raising plantations and attending to their cultural operations. Their general health was good.

Building Materials for Depressed Classes.

815. Doors, windows, sawn sizes, and reepers were supplied from the Government Saw Mills, Shimoga, to the Revenue Department for free supply through Amildars to members of the Depressed Classes.

Land for Cultivation to Wild Tribes, etc.

816. The Kadukurubars and Sholigars were also given land for cultivation under "Thakkal" system and made to introduce agricultural crops in teak plantations. The Kumridars and landless people in South Kanara were also allowed to raise food crops such as paddy, ragi, etc., under Kumri system in clearfelled areas. In Kollegal Division, the Sholigars continued to enjoy the lands leased to them free of assessment. They have nine settlements within Reserve Forest areas with a total population of 299 persons.

817. The concessions extended by the Government under "Malnad Improvement Scheme", were availed of by the ryots of Heggadadevanakote and Hunsur taluks.

Wild Life Preservation.

818. Protection of wild life continued to be one of the important activities of this Department.

819. The Venugopal Wild Life Park (310 sq. miles) of which the Bandipur Game Sanctuary (22 sq. miles) forms the sanctum-sanctorum and Jagar Valley Wild Life Park (61·29 sq. miles) were well maintained. The Dandeli Game Sanctuary (80 sq. miles) in Belgaum was also maintained satisfactorily. There was no alteration in the area

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of the islands constituting the Ranganthittu Bird Sanctuary near Srirangapatna which remained at 188—06 acres. Large number of acquatic birds migrate to the sanctuary for breeding and make in these islands their temporary habitation between June and September.

820. Arrangements to shoot bison and tiger were made successfully for His Highness the Governor of Mysore and various State Guests during the year.

821. Wild Life Day was celebrated with enthusiasm throughout the State.

Miscellaneous and Conclusion.

822. In Mysore Division, the Sagare Inam forests and Biligiri Rangan Temple forests (Area: 22,640 acres and 12 guntas) and Kalasa Inam Forests (6,769 acres and 39 guntas) in Chickmagalur Division continued under the management of the Department.

Elephants.

823. There were 74 elephants in Coorg Circle and 24 in Shimoga Circle at the end of the year. The health of the elephants in both the Circles was satisfactory.

Lease of lands in State Forests

824. Forty-six leases covering 2,037—45 acres in North Coorg Division and five leases covering 4,190-51 acres in South Kanara Division for Cardamom cultivation, continued to be in force. Besides, 139—30 acres in South Kanara Division leased for areca plantation to 17 lessees also continued to be operative. In Kollegal Division, 199 acres in Doddasampige Reserve Forest leased for coffee and cardamom cultivation also continued to be in force during the year.

825. One hundred and eighty-seven acres in the State Forests of Balur, Sargod and Thalkola of Chickmagalur Division and also five acres and eight guntas in Halsur State forest of Chickmagalur Division continued to be under cardamom cultivation.

Vanamahotsava.

826. The Department participated in the Vanamahotsava celebrations and distributed several lakhs of seedlings of economic species to the public and to local bodies, educational institutions, etc.

827. To popularise forestry as a profession and to inculcate love of forests, students from high schools were encouraged to raise forest trees in barron forest lands.